Comparison of the effect of sublingual buprenorphine and intravenous fentanyl pump on pain control after cesarean section by spinal ansetesia

Abctract

Back ground and abjective: One of the major challenges in women's surgery, including cesarean section, is postoperative pain control. Postoperative pain as one of the most common problems in the postoperative phase can lead to a significant reduction in the quality of surgical operations, along with other problems such as nausea and vomiting, hypotension and shivering. Therefore, the present study aimed to compare the effect of sublingual buprenorphine and intravenous fentanyl pump on post-operative cesarean section pain control and its effects among patients.

Methods: The present study is a randomized, double-blind clinical trial. Patients aged 18-60 years old and all candidates had cesarean section at Alavi Hospital in Ardabil in 2017. After obtaining consent from patients for inclusion in the study, 80 patients were selected using simple sampling method and divided into two groups of 40. In the first group, 40 patients received fentanyl and placebo tablets, the second group(40 pationts) received normal saline and buprenorphine pills. In the first group (sublingual buprenorphine + placebo pump), it was repeated 6 and 12 hours after the first dose. In the second group, the pump was used to inject intravenous fentanyl and the drug lasted for up to 24 hours. Then, VAS scores, vomiting nausea, sedation (from Ramsay sedation scale), and the amount of need for pain at 2, 6, 12, and 24 hours, and postoperative analgesia (time to first needle) were evaluated. Finally, all patient information was entered into a pre-designed checklist and all the data entered into the SPSS v20 statistical analysis program and we analyzed the data.

Results: The results of VAS score in patients showed that, except at 24 hours after surgery, in other hours of study, the pain score in the two groups did not show any significant difference. In the fentanyl group, the use of analgesics was higher than the buprenorphine group. In the early hours after surgery (hours 2 and 6), the incidence of nausea and vomiting was significantly lower in the buprenorphine group than in the fentanyl group, but in the other hours, no such difference was observed. The sedation score was also evaluated, but no significant difference was observed between the two groups. Also, the incidence of side effects in the two groups did not differ significantly.

Conclusion: The results of this study showed that buprenorphine is an effective drug in reducing postoperative pain in post-operative patients and, due to its very low side effects, can be routinely used in patients.

Keywords: Regional anesthesia, Caesarean section, Buprenorphine, Fentanyl.